



**DAX**plus

Innovative Strategy Indices

Successful exploitation  
of stock exchange trends

# Deutsche Börse Index Products

## Benchmarks and Underlyings for International Financial Products

Deutsche Börse develops, calculates and disseminates over 3,000 indices under the umbrella brands DAX®, DAXplus® and DAXglobal®, thus making it one of the world's most innovative and renowned index providers. The well known domestic indices DAX®, MDAX® and DivDAX® offer transparency and a clear breakdown for the German market.

The DAXglobal® family, which entails market specific international indices, allows investors to participate, amongst others, in the development of global emerging markets. The DAXplus® strategy indices were developed to offer an attractive risk/return profile compared to the overall market. Above all, this family includes indices based on modern portfolio theory and indices that integrate derivative components, representing the advancement of traditional indices and covering new investment opportunities.

In addition to pure equity indices, Deutsche Börse also offers indices for bonds, commodities, volatility and longevity risks. Tradable and investible commodity indices are calculated under the umbrella brand CX®. Investors can profit from unexpected market fluctuations with VDAX-NEW® volatility indices.

Many of these index products are attractive underlyings for financial instruments: DAX® is the fourth largest underlying for index derivatives in the world; to date well over 200 derivatives have been issued on DivDAX® while the DAXglobal® Russia index is one of the world's most successful underlyings for ETFs.

## Strategy Indices

### Benefit from index-based investment strategies

Strategy indices not only reflect the average performance of various underlyings but more importantly implement investment strategies in a systematic and transparent manner, making them tradable for all investors via the respective financial instruments. Each of these indices replicates a recognized or innovative investment strategy, either with the goal of outperforming the overall market as a benchmark or to offer investors the ideal risk/return profile for their investments. Strategies may follow successful seasonal price trend patterns such as the well-known “sell in May and go away” concept which was successfully implemented in the DAXplus® Seasonal Strategy Index.

Investors can benefit from falling stock prices with the ShortDAX®, which inversely tracks the performance of the DAX® Index. For example, if the DAX® falls by five percent on a given day, the ShortDAX® rises by this amount. Other indices, like the LevDAX®, react with a predefined leverage factor on certain share price movements. The LevDAX® is linked to the movements of the DAX® benchmark index with a leverage factor of two.

Any movement on the DAX® results in twice the change on the LevDAX®; in the case of both rising and falling prices.

With DAXplus®, Deutsche Börse has established an index family for strategy indices with different strategic approaches, for example DAXplus® Covered Call or DAXplus® Protective Put, which are both based on well-known options strategies. On the basis of positive, neutral or negative market expectation and the volatility of the options' underlying, the investor can enter positions that serve to hedge the underlying.

The indices DAXplus® Minimum Variance and DAXplus® Maximum Sharpe Ratio are based on the portfolio strategy for which Prof. Harry M. Markowitz was awarded the Nobel Prize. The core thesis of this theory states that the risk of an efficient portfolio is lower than the average risk of the individual securities.

# DAXplus®

## Innovative Strategy Indices

### DivDAX® Index

Comprises the 15 DAX® companies with the highest dividend yields. The dividend yield is calculated by dividing the dividend paid by the closing price of the share on the day before distribution.

### DAXplus® Seasonal Strategy Index

Tracks DAX® development from October to July. In August and September, months which historically are subject to weaker performance, index calculation is suspended and the index level for the final trading day in July is set until the first trading day in October. The DAXplus® Seasonal Strategy index focuses on the months that historically perform strongly, thus outperforming the DAX® by an average of more than 12 percent in the past five years.

### DAXplus® Export Strategy Index

Is made up of the ten strongest exporters in the DAX® and MDAX®, measured by the share of revenues generated outside of Germany. The high liquidity of the stocks included in the index makes it an attractive underlying for derivative products.

### LevDAX® Indices

These indices are leverage-linked to the development of the DAX®. For this reason, the index rises and falls stronger than the DAX® depending on the leverage factor, thus offering a simple strategy for overproportional participation in market movements. The leverage factor for the LevDAX® is adjusted on a daily basis to ensure that the index achieves a certain number of times the DAX® performance based on the previous day's closing level. Protection against total loss is ensured by an ongoing adjustment of the leverage factor if the DAX drops by more than 25 percent against the previous day.

There are LevDAX® indices with leverage factors of 2 and 4.

### ShortDAX® Indices

ShortDAX® indices move in the opposite direction to the DAX®. For example, if the DAX® rises by 5 percent, the ShortDAX® falls by 5 percent – and vice versa.

Investors with a large risk appetite can invest in the ShortDAX® x2 and ShortDAX® x4 indices. The x in the name represents the respective leverage factor: ShortDAX® x2 reflects double the negative daily performance of the DAX®; ShortDAX® x4 means four times the negative daily performance of the DAX®.

The ShortDAX® gives investors who expect a negative performance of the DAX® index or who are looking for a short-term, efficient hedge against falling prices access to a tactical investment strategy in the form of a rule-based and transparent index that guarantees positive returns when DAX® prices fall.

### DAXplus® Covered Call Index

The DAXplus® Covered Call Index combines a passive index investment with an options position. The entire DAX® index is thus purchased while a call option is simultaneously sold. The premium from the sale of the option provides a risk buffer compared with a pure DAX® investment. Thus investors have access for the first time to an index-based options strategy that can be traded in real time. The high liquidity of the DAX® options traded on Eurex® makes the index an attractive underlying for structured products, such as certificates and warrants, as well as passive investment and index funds.

### DAXplus® Protective Put Index

This traditional hedging strategy involves purchasing a standardized, Eurex®-traded put option in addition to a DAX® portfolio. The index thus hedges the entire DAX® portfolio with a 5 percent “out of the money” put option. This type of combination strategy limits losses to the amount of the put premium. The aim of this strategy is to hedge a portfolio against price losses without sacrificing potential price gains. It is thus particularly well suited to risk-averse investors.

# DAXplus®

## Innovative Strategy Indices

### **DAXplus® Minimum Variance Index**

This index is the world's first tradable index based on the Nobel Prize-winning Modern Portfolio Theory. The essence of this strategy is that efficient portfolios with a given expected return bear the lowest risk. The aim of the strategy is therefore to develop a risk-optimized portfolio that involves weighting the constituents in such a way as to minimize risk (variance).

The DAXplus® Minimum Variance Germany tracks a DAX®-based minimum-variance portfolio. On a quarterly basis, the index invests in a portfolio of DAX® stocks that has the lowest risk (variance).

### **DAXplus® Maximum Sharpe Ratio Index**

This index is based on Professor Markowitz's Nobel Prize-winning principles of portfolio theory and offers investors an optimum risk-adjusted investment opportunity. Traditional indices track a basket of companies that are weighted according to their (free float) market capitalization. From a portfolio theory perspective, however, these indices are not ideal as they do not lie on Markowitz's efficiency line. By weighting the companies in the index differently, a better performance can be achieved with the same level of risk. The best portfolio in terms of risk is one that maximizes the risk-adjusted performance, which is also known as the Sharpe Ratio.

### **DAXplus® Maximum Dividend Index**

The DAXplus® Maximum Dividend Index was designed primarily for investors who want to focus less on price fluctuations and more on the development of the economic results of Germany's key companies. It maximizes the dividend return, i.e. the annual dividend as a percentage of the investment for the most important German equities.

The index consists of the 20 companies represented in the HDAX® which will pay a dividend in the next six months and which have the highest expected dividend returns. This return is determined from the announced or estimated dividend amount and the closing price of the share at the time of selection.

### **DAXplus® Directors Dealings Index**

This index tracks the performance of companies in which employees subject to reporting requirements have bought a particularly high volume of shares over the past twelve months, with older share purchases receiving a lower weighting than current ones. Back-tests reveal that an investment based on the directors' dealing approach can considerably outperform established benchmarks in rising markets.

### **DAXplus® Risk Trigger Index**

With the innovative DAXplus® Risk Trigger index concept, Deutsche Börse is the first index provider to enable risk-averse investors to participate in the performance of an equity index portfolio, while at the same time limiting the risk of loss involved in getting out early when volatility is high. If the DAX®, DAXglobal® BRIC and DAXglobal® Russia indices underlying the Risk Trigger indices exceed a certain defined threshold, the investment is reallocated in its entirety to the money market (eb.rexx® Money Market Index). Equity investments are thus exchanged for risk-free money market investments with a low but guaranteed return.

**Published by**

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September 2009  
Order number 2302-2866

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